

REMARKS

This is a full and timely response to the Office Action mailed December 26, 2007, submitted concurrently with a one month extension of time to extend the due date for response to April 28, 2008.

By this Amendment, claims 1 and 2 have been amended to more particularly define the present invention and to overcome the rejection under 35 U.S.C. §112, second paragraph. Further, new claim 6 has been added to further protect specific embodiments of the present invention. Support for the claim amendments and new claims can be readily found variously throughout the specification and the original claims, see, in particular, pages 4-6 of the specification. Thus, claims 1-6 are currently pending in this application with claim 5 being withdrawn.

In view of these amendments, Applicant believes that all pending claims are in condition for allowance. Reexamination and reconsideration in light of the above amendments and the following remarks is respectfully requested.

Rejection under 35 U.S.C. §112

Claims 1-4 are rejected under 35 U.S.C. §112, second paragraph, for allegedly being indefinite. Applicant has amended claim 1 to address the issues raised by the Examiner (i.e. consistency of terms, antecedent basis issues, chronology issues, tenses and relationship of claimed elements). Thus, in view of the claim amendments, withdraw of the present rejection is respectfully requested.

Rejection under 35 U.S.C. §102 and §103

Claims 1-4 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as allegedly being unpatentable over Smart (U.S. Patent No. 6,337,462). Applicant respectfully traverses this rejection.

To constitute anticipation of the claimed invention under U.S. practice, the prior art reference must literally or inherently teach each and every limitation of the claims. Further, to establish a *prima facie* case of obviousness, the prior art reference must teach or suggest all the claim limitations, and provide some suggestion or motivation, either in the references themselves or

in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.. Here, in this case, the cited reference, Smart, fails to teach or suggest all the claim limitations with particular emphasis on the limitation “*wherein the optimum wavelength of light permits a region of an internal material portion of the brittle material and the surface vicinity of the brittle material to become an absorbing region by the irradiation of the light onto the brittle material*”.

The present invention features using a plate-shaped sample (*of a same material as the brittle material to be processed*) to select an optimal wavelength of light for the absorptance of the processed brittle material. The optimal wavelength is selected based on a calculated value of absorptance and actual absorptance data obtained by the irradiation of light onto the plate-shaped sample. *The optimum wavelength of light permits a region of an internal material portion of the brittle material and the surface vicinity of the brittle material to become an absorbing region by the irradiation of the light onto the brittle material* thereby allowing the generation of an uniform heating band in the thickness direction and the formation of cracks deep in the internal portion of the brittle material.

In contrast, Smart discloses a wavelength shifter for shifting the wavelength of the laser output from a conventional wavelength to a wavelength beyond the absorption edge of the substrate but shorter than 1.2 μm in order to obtain a decrease in absorption of the laser output by the substrate due to the shift in the wavelength of the laser output. The purpose of such a wavelength shifter is to minimize thermal processing damage to the substrate and not for the generation of an uniform heating band in the thickness direction and the formation of cracks deep in the internal portion of the brittle material. Thus, it is clear that Smart does not at all teach or suggest the limitation “*wherein the optimum wavelength of light permits a region of an internal material portion of the brittle material and the surface vicinity of the brittle material to become an absorbing region by the irradiation of the light onto the brittle material*”.

Applicant also notes that a *prima facie* case of obviousness can be rebutted if the claimed process possesses unexpected and superior properties not taught in the prior art. In this regard, Applicant wishes to emphasize to the Examiner that in the present invention, the brittle material can be heated in the surface vicinity substantially simultaneously to the heating of the internal material

portion thereby allowing the necessary temperature increase to be obtained within a short time (with the only delay caused by the speed of light propagation). This, in turn, greatly accelerates the processing speed of the brittle material. Such superior features of the present invention is not at all taught or suggested in Smart.

Thus, for these reasons, withdrawal of the present rejection is respectfully requested.

CONCLUSION

For the foregoing reasons, all the claims now pending in the present application are believed to be clearly patentable over the outstanding rejections. Accordingly, favorable reconsideration of the claims in light of the above remarks is courteously solicited. If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

Dated: April 25, 2008

Respectfully submitted,

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Should additional fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge Deposit Account No. 50-4422 for any such fees; and applicant(s) hereby petition for any needed extension of time.